WHAT IS CLAIMED IS:

1. An array apparatus comprising:

a micromachined structure having a plurality of actuatable elements;

an insulative substrate; and

electrostatic electrodes embedded in said insulative substrate and disposed in alignment with individual ones of said actuatable elements on a reverse side of said insulative substrate, said electrostatic electrodes being configured for fanout and coupled via traces through in said insulative substrate.

2. The apparatus of claim 1 further having a driver module mounted to a reverse side of said insulative substrate and said micromachined structure being mounted directly on an obverse side of the insulative substrate.

3. An array apparatus comprising:

a micromachined structure having a plurality of actuatable elements;

an insulative substrate; and

electrostatic electrodes embedded in said insulative substrate and disposed in alignment with individual ones of said actuatable elements on a reverse side of said insulative substrate, said micromachined structure and said insulative substrate having mismatched thermal-expansion characteristics, further including a flexible mounting and bias means which allow uneven expansion in x and y while maintaining z-axis stability.

4. The apparatus according to claim 3 wherein said micromachined structure is a silicon on insulator (SOI) and said insulative structure is a low-temperature co-fired ceramic (LTCC).

5. The apparatus according to claim 4 wherein said LTCC comprises a plurality of ceramic layers with electrical resistors buried between said layers and further including a driver module mounted on an obverse side of said insulative substrate and a heat extraction means juxtaposed to said driver module for drawing heat away from said insulative substrate.

6. The apparatus according to claim 3 wherein said flexible mounting and bias means further include bridge means between posts, said bridge means slidably confronting a reverse side of the micromachined structure.

7. The apparatus according to claim 3 wherein said insulative structure is a glass.

8. The apparatus according to claim 3 wherein current-limiting resistances are imbedded in the insulative structure in circuit paths between said electrodes and said driver module.

9. The apparatus according to claim 3 wherein the flexible mounting and bias means comprise posts of metal pins mounted to the insulative layer and each has a fixed cap confronting an reverse restraining surface of said micromachined structure, and a elastomeric element between juxtaposed obverse surfaces of said micromachined structure and said insulative structure.

10. The apparatus according to claim 3 wherein said micromachined structure is a MEMS array.

11. A method for fabricating a micromachined apparatus comprising the steps of:

providing a wafer with a metallized obverse surface;

etching an array of a cavity and hinges in said wafer thus forming an array of a conductive handle and a mirror with metallization on an obverse surface;

releasing oxide holding the mirror;

metallizing walls of the cavity and a reverse surface of said mirror;

providing a ceramic structure of stacked metallization and insulative ceramic layers;

providing first and second electrodes on an obverse surface of said ceramic structure, said electrodes being disposed to confront said mirror;

electrically connecting the electrodes to a driver on a reverse side of the ceramic structure via traces through said ceramic structure;

providing at least one bonding element extending from the obverse side of the ceramic structure;

juxtaposing said wafer and said ceramic structure, said at least one mounting pin extending through an alignment hole in said wafer, said alignment hole having lateral spacing to permit relative motion in x and y; and

providing a constraint on said bonding element to constrain relative motion of said ceramic and said wafer along a z-axis.

12. The method according to claim 11 wherein said constraint is a cap.

13. The method according to claim 11 further including:

providing centering means to bias x and y motion to a neutral position.

14. The method according to claim 11 wherein said relative motion is constrained by a self-centering biasing means.

15. The method according to claim 12 wherein said bonding element is a first alignment pin, further including the step of:

providing at least a second alignment pin; and

providing a bridge between said first alignment pin and second alignment pin, said bridge being slidably juxtaposed to said SOI wafer to constrain motion in the z axis.

16. The method according to claim 15 further including the step of:

providing at least a third alignment pin; and

providing a stabilizing bridge between said first alignment pin, said second alignment pin and said third alignment pin.

17. The method according to claim 11 further including:

firing said ceramic structure; and

mounting said electrodes to said ceramic structure after firing said ceramic structure.